St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

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CALENDAR.

Fri.,	July	1.—Dr. A. E. Gow and Mr. Girling Ball on duty.
Sat.,	,,	2.—Cricket Match *v.* St. George's Hospital. Home. Tennis Match *v.* Royal Artillery (Woolwich). Home.
Tues.,	,,	5.—Prof. Fraser and Prof. Gask on duty.
Fri.,	,,	8.—Sir P. Hartley and Mr. L. Bathe Rawling on duty.
Sat.,	,,	9.—Cricket Match *v.* Hornsey. Home. Tennis Match *v.* Guy's Hospital. Home.
Tues.,	,,	12.—Sir Thomas Horder and Sir C. Gordon Watson on duty.
Fri.,	,,	15.—Dr. C. M. Hinds Howell and Mr. Harold Wilson on duty.
Sat.,		16.—Cricket Match *v.* King's College Hospital. Home. Tennis Match *v.* Shoeburyness Garrison. Away.
Tues.,	,,	19.—Dr. A. E. Gow and Mr. Girling Ball on duty. **Last date for receiving matter for the August issue of the Journal.**
Wed.,		20.—Cricket Match *v.* St. Anne's. Away. Athletic Match *v.* Metropolitan Police.
Fri.,	,,	22.—Prof. Fraser and Prof. Gask on duty.
Sat.,	,,	23.—Tennis Match *v.* Staff College (Camberley). Away.
Tues.,	,,	26.—Sir P. Hartley and Mr. L. Bathe Rawling on duty.
Fri.,	,,	29.—Sir Thomas Horder and Sir C. Gordon Watson on duty.

EDITORIAL.

THE Treasurer's Report for the year 1931 provides some interesting information for those who take an interest in the finances of the Hospital. In spite of decreased annual subscriptions and donations, the Income and Expenditure Account shows a substantial balance on the right side—a fact which speaks highly for the success of the recent economy campaign. Very interesting and significant are the facts relating to the Reconstruction Appeal, whose activities have now been reduced to a minimum, although it has not been entirely closed down.

It appears that 42% of our in-patients come from the provinces; this indicates that the Hospital is an institution of national as well as local importance. Moreover, we frequently receive and welcome medical men as visitors from all parts of the world.

The inadequacy of the in-patient accommodation of the Women's Department is commented upon, and the scheme of amalgamation with a neighbouring maternity hospital is mentioned. Negotiations are going on at present with this object in view, but the necessary building operations would mean very considerable capital outlay. A satisfactory scheme for financing the project has yet to be evolved. The same difficulty delays the commencement of alterations in the South Wing, which now stands empty.

Rumours are abroad that a site has been selected for the new Medical College, which is so badly needed. We sincerely hope that the necessary financial support will be forthcoming.

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We congratulate all those members of the Hospital who have recently been successful in their examinations, and whose names will be found in the appropriate columns. Out of 41 successful candidates at the recent Final Fellowship examination, 13 were Bart.'s men, including Mr. R. F. Phillips and Mr. V. C. Thompson, who are at present working in the Hospital.

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We congratulate our Treasurer, Lord Stanmore, on receiving the honour of appointment to His Majesty's Privy Council. Other Bart.'s men appearing in the Birthday Honours List were Lt.-Col. F. E. Fremantle, M.D., F.R.C.S., A. S. Woodwark, Esq., M.D., F.R.C.P., and A. R. Cook, Esq., M.D. (Knights Bachelor); also H. B. Owen, Esq., M.B., and E. K. Campbell, Esq., M.B., F.R.C.S., who each received the O.B.E., and Brevet-Col. F. P. Mackie, M.D., F.R.C.S., F.R.C.P., who received the decoration of C.S.I.

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We regret to announce the death of Dr. Herbert Mundy, of Natal, on May 26th, at the age of 61. Dr.

MEDICAL FACULTY McGILL UNIVERSITY

Mundy was a well-known figure at Bart.'s thirty years ago, and his son is with us at present.

Dr. Maurice Pearson, of Durban, writes: "By the death of Herbert Mundy the profession in Natal has lost not only one of its senior members, but one who was universally popular, alike with his colleagues and with the public. Apart from his brilliant professional qualities, Mundy's most outstanding characters were his imperturbable good humour and his gift for seeing the cheery side of things.

"Mundy's hospital career was a great one; he trained at St. Bartholomew's Hospital, where he took the Treasurer's and other prizes, and was House Surgeon to Sir Henry Butlin and Mr. Lockwood. He then took his English F.R.C.S., securing top marks, and became Demonstrator of Anatomy—an appointment which at that time was the first rung on the ladder leading to the Senior Surgical Staff. No one then doubted that he was destined for a consulting and operative career on the Staff. An upset in health, and perhaps some uncertainty as to being able to stand the financial strain of waiting, caused him to change his plans and come to Natal about 1903.

"He was joined in partnership by another Bart.'s man, Burnand (nephew of Sir F. Burnand, of *Punch*), who died during the war. Almost at once Mundy worked up a large general practice. His physical energy was tremendous; no distance was so great, no night so wet as to deter him from going, often on foot (for it was before the days of motors), to a patient in the country; he never refused rich or poor, European, native or Indian, and therefore necessarily he did a great deal of unpaid work. Big-game shooting was almost his only hobby apart from his work, and a hobby to which he devoted his annual holiday right up to the end.

"In his practice Mundy was one of those sound and level-headed men who never get a 'bee in the bonnet,' who never allow themselves to be rushed off their feet by the newest theory; in fact a man that any one of us, his colleagues, could most gladly and with absolute confidence go to for help if ill himself. He had one of the largest practices in Natal, and had not an enemy in the world.

"Mundy was returning from a visit to his farm in Zululand when his car broke down, and he spent the night with a companion and a native boy in the veldt, devoured by mosquitoes. All three developed severe malarial symptoms eleven days later. Mundy died after only five days' illness, and was unconscious most of the time."

We should like to express to Mrs. Mundy and her sons and daughters our sympathy with their recent bereavement.

THE CANCER PROBLEM: A PLEA FOR PERIODIC EXAMINATION.

THE cancer problem has been likened to a gigantic puzzle, and like all such puzzles, the more pieces that are correctly put together, the easier it is to find the next piece. It is not until the last one is put in position that the whole picture can be properly understood.

On this great problem thousands of workers are employed, but broadly speaking they can be grouped under three headings: Firstly, those who are working at the ætiology of the disease; secondly, those who are investigating the best methods of getting an early diagnosis; and thirdly, those who are interested in finding out the best treatment. The public are always looking for some single discovery that will solve the whole problem, but unfortunately this is extremely unlikely. It is true that definite advances have been made in discovering certain ætiological factors, and very great improvements have been obtained in the methods of treatment, but on the question of early diagnosis it must be confessed that not much advance has been made, and only very little work is being done. This is the more surprising, since a careful examination of cancer statistics shows without a doubt that the one great hope of successful treatment at the present time lies in recognizing the disease and treating it in its very early stages.

Overwhelming evidence of the value of early diagnosis is to be found in the series of reports on cancer issued by the Ministry of Health from time to time. For example, the Ministry of Health Circular No. 716 (1926), on Cancer of the Breast, states that: "It was found that of the patients subjected to early operation, that is to say before the disease had extended beyond the breast itself, 94% were alive and well at the end of three years, 91% at the end of five years, and 87% at the end of ten years. On the other hand, the ghastly state of affairs that exists at the present moment is shown from Report No. 66, which states that "only 50% of patients suffering from malignant disease seek medical advice in a sufficiently early stage to have any proper cancer treatment whatever," and only a small percentage of these are early cases. In another Report it is mentioned that the average time that elapses before patients suffering from cancer of the uterus come to their medical adviser is from six to nine months, and in the case of cancer of the rectum, twelve months.

There are two main reasons why this state of affairs exists. The first and most important of these is *fear*.

A great many people are too frightened even to mention the word "cancer," and if a patient realizes that he is suffering from the disease he asks his friends not to noise it abroad, almost as if it were something unclean and to be ashamed of. The community as a whole has made up its mind that cancer is incurable and unavoidable, and that it should, therefore, be cut out of everyone's thoughts and made a taboo subject.

The second difficulty which militates against the early discovery of the disease is due to the fact that in its early stages cancer gives rise to no pain and to no urgent symptoms.

It will thus be seen that there are two problems to be solved—a psychological one and an educational one. The psychological problem has not been sufficiently realized by the medical profession. It has been argued that since only a few patients come and definitely say they are anxious lest they have cancer, therefore only a minority of people in the world are worried about it. Nothing can be further from the truth. The patients who are most exercised in their minds concerning cancer go to a doctor and relate various indefinite symptoms, but will *not* disclose the real object of their visit, with the result that they are frequently given a tonic and told not to worry about their health. On the other hand, the few who have got the moral courage to go and ask a definite question are often met with the well-meaning remark: "Why should you have cancer? You are looking quite fit."

There is only one way in which the psychological difficulty can be overcome, namely, by boldly telling the public that periodic visits to the doctor to exclude malignant disease or any condition likely to lead to it is a common-sense precaution, which should be undertaken by everyone over the age of forty. Such a suggestion may at first sight sound very revolutionary, but after all this common-sense precaution has been adopted by the majority of the public in connection with the care of their teeth, and such precautionary measures are considered to be the right procedure by every expectant mother throughout the country. Why, then, should it be impossible to persuade the public to do the same in the case of malignant disease, which attacks the most healthy of people with so little warning?

It has been suggested that if the public are prepared to go for periodic examinations in connection with malignant disease, they should go for such examinations in respect of all diseases. As a matter of fact there is not the same necessity in the majority of other diseases, since the body as a rule develops resistance, at any rate for a time, *pari passu* with the disease, and there is still time to treat the patient successfully after symptoms have developed. Apart from any question of desirability, it is probably easier to persuade the public to attend for an anti-cancer inspection than for a general overhaul.

An argument that is sometimes used against such periodic visits is the difficulty of diagnosing any but the "accessible cancers." My friend Dr. Patterson has looked up statistics for me, and finds that deaths from the "accessible cancers" in 1926 accounted for 37·3% of all cancer deaths; and surely if it is possible to reduce the mortality by anything like that percentage, it would be a big move in the right direction. Again, it may be said that forty years of age is somewhat young to start periodic examinations. As a matter of fact, there is a sharp rise in the incidence of cancer between 40, 45 and 50. Before 45 the deaths from accessible cancers are 10·1%, but between 45 and 50 they rise to 20·2%.

The alternative to such periodic examinations is to try to teach the public symptomatology. Although there is no doubt that great benefit will result from discussing with intelligent patients the question of early symptoms of malignant disease, yet efforts to teach the masses symptomatology can never be successful nor desirable. Unless the patient fully understands that the symptoms of malignant disease can occur with other conditions which are of little importance, there is a very grave risk of creating neurasthenics, whereas periodic visits to the doctor, with complete faith that he will give an answer to their question, cannot but relieve the haunting fear that exists in the minds of so many people.

Once it has been agreed that the former course is preferable and probably more practicable, the following organization is suggested as a means of carrying it out. First, the public must be educated to discuss cancer frankly, and be encouraged to go to their own practitioner and ask him if there is any condition which, if left untreated, might lead to cancer. Secondly, there must be diagnostic centres near at hand to which any doubtful case can be referred by the practitioner.

Medical students in their short time in hospital can only see a certain number of cases of malignant disease, and unfortunately at present they see the disease in its advanced stages. When they go into practice they see even fewer patients per year suffering from cancer. This has led some people to argue that it would be of little value to visit their own doctor. This, however, is far from the truth. After all, the general practitioner does not have the responsibility of making the final diagnosis, but has merely to realize that there is something abnormal about a particular organ, and then to send the patient to a diagnostic centre for a further opinion.

One of the most encouraging signs of the times in

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connection with the early diagnosis of malignant disease, is the increasing number of patients who come to the Out-Patient Department, with a note from their doctor saying that he is not quite happy as to whether the condition might not be a very early cancer.

This short note is written to encourage every Bart.'s man to do all in his power to help in the early diagnosis of malignant disease, and to stimulate patients to pay periodic visits to their medical practitioners, and thus to ease the minds and save the lives of thousands of people.

MALCOLM DONALDSON.

ROBERT BOYLE.

An Address given to the Osler Club on April 15th.

IT is a commonplace to observe in relation to the history of science and medicine that progress had slept the sleep of the dead for fourteen hundred years, from the time of Galen until rudely awakened by William Harvey at the beginning of the seventeenth century. The publication of *De Motu Cordis* in 1628 is a convenient point for fixing this intellectual earthquake. Within a few years it had shaken all Europe, and started the vibrations in the world of science which have never lost their force up to the present day. The whole secret of Harvey's influence was, of course, the introduction of the experimental method into the elucidation of natural phenomena. The fascination which his discoveries and his methods exercised upon his contemporaries must have been extreme, though there was an interval of some twenty or thirty years before references to him and his work became at all numerous in the books of other writers in this country. I have long thought that this may have been due to the fact that Harvey's influence was really advanced more by his second book, *De Generatione Animalium*, published in 1651, than by his first. The fame of this book, which deals with generation and embryology, has been overshadowed by his more spectacular demonstration of the circulation of the blood. However this may be, it is not until after 1650 that the results of his work become obvious.

In the history of experimental science the name of Lord Bacon takes an honourable place beside that of Harvey, for his *Sylva Sylvarum*, his last work and published after his death in 1626, is an experimental natural history, ranging over every department of physical and biological science. Did he not also write that strange and wordy allegory, his *New Atlantis*, about 1615? This was printed with the *Sylva Sylvarum* in 1628, and is said to have had much influence in the establishment of the Royal Society. But Lord Bacon was more philosopher than practical man, and few of his experiments can be said to have resulted in new discoveries. He insisted, however, that experimental science is not necessarily of immediate use, and he spoke often, according to his secretary and editor, of *Experimenta Fructifera* and *Experimenta Lucifera*—Experiments of Use and Experiments of Light. He had, therefore, the true scientific spirit.

I must now turn for a moment to one whose name should never be omitted at these gatherings, for our Patron Saint is listening. Sir Thomas Browne was born in 1605, and he was therefore forty-one when he wrote his celebrated letter of advice upon what to read to his young friend Henry Power, who was then studying medicine. Browne was himself an assiduous experimenter, as is proved by a perusal of his works, especially the miscellaneous papers which were not printed until 150 years after his death. He therefore begins his letter with a piece of what was then modernistic advice: "ἐκ βιβλίου κυβερνῆτα is grown into a proverb; and no less ridiculous are they who think out of books to become physicians." After this warning he enumerates the authors whose works Power must read, and in the middle he ejaculates: "And be sure you make yourself master of Dr. Harvey's piece *De Circul. Sangu.;* which discovery," he adds, "I prefer to that of Columbus."

There is an unfortunate doubt here as to whether he meant the discovery of America by Christopher Columbus, or the work of the other, Realdus Columbus, on the pulmonary circulation, but in any case the moral was the same. Power was to read books, but he must also not be a stranger to the useful part of chymistry. He must see chymicall operations in hospitals and private houses, and see what chymistators do in their officines. He must perfect himself in anatomy, be well versed in *materia medicamentorum* and surgery, but all with a view to physic, which was his business. Power was twenty-three when he had this letter from Browne in 1646, and he proved to be much more than merely a good pupil. He practised medicine, but he also thought and experimented on his own account, the outcome being his book on *Experimental Philosophy*, published in 1664. This was actually the first work on microscopy published in this country, but, like so many of the most desirable books, it is uncommon and little known, so that I had not appreciated its attractions until I obtained a copy a few months ago. It is full of references to Harvey, Bacon, Browne and other contemporaries, but for my present purpose its chief importance lies in its more

philosophical observations. Power sensed and expressed so admirably the spirit that was abroad in those extraordinary years, and his language, profoundly influenced, it is obvious, by Browne, is so picturesque, that I cannot help quoting: "Had the winged Souls of our modern Heros been lime-twig'd with such ignoble conceptions as these, they had never flown up to those rare Inventions with which they have so enriched our latter dayes; we had wanted the useful Inventions of Guns, Printing, Navigation, Paper, and Sugar; we had wanted Decimal and Symbolical Arithmetick, the Analytical Algebra, the Magnetical Philosophy, the Logarithms, the Hydrargyral Experiment, the glorious Inventions of Dioptrick Glasses, Wind Guns, and the Noble Boyle's Pneumatick Engine.

"Nay what strangers had we been at home? and within the circle of our own selves? We had yet never known the Mesentericall and Thoracical *Lacteæ*, the Blood's Circulation, the Lymphiducts, and other admirable Curiosities in this fabrick of our Selves.

"All which incomparable Inventions do not only solicite, but me-thinks should inflame our endeavours to attempt even Impossibilities, and to make the world know there are not difficulties enough in Philosophy for a vigorous and active reason. . . .

"You are the enlarged and Elastical Souls of the world, who removing all former rubbish, and prejudicial resistances, do make way for the Springy Intellect to flye out into its desired Expansion. When I seriously contemplate the freedom of your Spirits, the excellency of your Principles, the vast reach of your Designs, to unriddle all Nature; me-thinks you have done more than men already, and may be well placed in a rank specifically different from the rest of groveling Humanity.

"And this is the Age wherein all men's Souls are in a kind of fermentation and the Spirit of Wisdom and Learning begins to mount and free itself from those drossie and terrene Impediments wherewith it hath been so long clogg'd, and from the insipid phlegm and *Caput Mortuum* of useless notions, in which it has endured so long a fixation."

At last I am brought down to the proper subject of this discourse. Power has mentioned in his exordium the name of Robert Boyle with his pneumatick engine, and Boyle it was who typified the spirit of his age and translated that spirit into action. His mind was above all others the one in which Power's "kind of fermentation" was working, and it worked with such a fury that Boyle himself must sometimes have been astonished at his own output. Of course I ought to have introduced this subject by giving you an account of the origin, in 1645, and later development of the Royal Society of London, weaving into the story the names of Samuel Pepys, John Evelyn, and King Charles II, of Sir Christopher Wren, Lower, Willis, Hook, and all Boyle's other associates who were carrying on the experimental method in London and Oxford. But this story has been written many times before, and my object is to concentrate on Robert Boyle, who was the hub of the scientific world of his day, and to attempt a presentation of his personality and achievements. I may say at the outset that in doing this I am merely the unworthy mouthpiece of your late Treasurer, Dr. John Fulton. It was from him that I received the impetus to form a collection of Boyle's works, and in making this communication I have stolen extensively from his writings without further acknowledgment.

Robert Boyle was born in Ireland in 1627. He was not, however, an Irishman, being the seventh son and fourteenth child of Richard Boyle, first Earl of Cork, who had gone to Ireland in 1588 as a clerk in the service of Queen Elizabeth. This Richard Boyle was a shrewd and unscrupulous man, who, within ten years of leaving England, became the most wealthy and powerful man in all Ireland. His youngest son, Robert, did not inherit his father's worldly wisdom, so that it was most fortunate that he did not have to earn his living. His early education he received at Eton under Sir Henry Wotton, and he then travelled with a judicious tutor on the Continent, seeing the world, gathering general culture, and learning the languages. When he returned to England he divided his time between the house of one of his sisters in London and his own estate in Dorset. After leaving Eton he had no further formal education, and his fortunes enabled him to follow untrammelled the bent of his own mind, which led him naturally and inevitably to scientific experiment. He afterwards became familiar with Oxford and its atmosphere, because his associates of the "Invisible College," as the nucleus of the future Royal Society called themselves, congregated there; but although he lived there from 1654 to 1668, he never really absorbed the academic atmosphere of the visible colleges, and he remained the perfect example of the amateur who rode his scientific hobby-horse to such purpose that his achievements transcended those of any of his professional contemporaries. At that date, the universities did not regard general science as a part of their proper activities, and any scientist outside mathematics, astronomy and medicine was almost necessarily an amateur, or "virtuoso" as it was then called. Before the age of 20 Robert Boyle was a dynamic force in the embryonic world of science, and by the time he was 23 he had written his remarkable book on *The Usefulness of Experimental Philosophy* (published in 1663), in which he appeared as the persuasive exponent of the experimental method. In this

book he shows a wide knowledge of natural history, medicine, physics and chemistry. It is divided into two parts, the first being concerned with a general consideration of experimental philosophy in relation to the mind of man.

He makes an eloquent plea for the habit of curiosity, and likens the incurious man to "a Spider in a Palace, who, taking notice only of those objects that obtrude themselves upon her senses, lives ignorant of all the other rooms of the house," and so spends a self-centred and ignoble life entrapping flies. Her cobwebs, even though consisting of very subtle threads, are unserviceable for any other than her own trifling uses. He attaches a special virtue to curiosity as to the structure and workings of man's body. "One would think," he says, "that the conversing with dead and stinking Carkases (that are not onely hideous objects in themselves, but made more ghastly by the putting us in mind that ourselves must be such) should be not onely a very melancholy, but a very hated employment. And yet, there are Anatomists who dote upon it; and I confess its Instructiveness has not onely so reconciled me to it, but so enamor'd me of it, that I have often spent hours much less delightfully, not onely in Courts, but even in Libraries, than in tracing in these forsaken Mansions, the inimitable Workmanship of the Omniscient Architect."

The second part of *The Usefulness of Experimental Philosophy* deals chiefly with physic, and is divided into five sections—Physiological, Pathological, Semiotical, Hygienical and Therapeutical. In the course of a postscript to the Pathological section he describes the first experiments which he made at Oxford with Wren and Wilkins on the intravenous injection of drugs into dogs, experiments which soon led to the nobler discovery of the possibility of blood transfusion. There are innumerable other interesting experimental observations in relation to medicine, both projected and actually performed. In other ways, such as his estimation of the value of post-mortem examinations, he takes a remarkably enlightened view.

It was characteristic that so early in his career Boyle should have put down his scientific creed in writing, presumably in order to clear his mind, for there can have been no thought of publication at the time, and the book was not printed until thirteen years later, when his reputation was already established.

Having now laid his philosophical foundation, Boyle proceeded with his experimental work, and in 1658 engaged the services of Robert Hooke at Oxford. Hooke was then a student chorister at Christchurch, but he possessed an inventive genius, and he and Boyle together devised their celebrated air-pump. With this they carried out their investigations into the properties of gases, thus providing material for Boyle's first scientific work, entitled *The Spring and Weight of the Air*, 1660. The second edition, published in 1662, contains the formulation of "Boyle's law," and thus, at the age of 35, Boyle had made a contribution to physical science of fundamental importance, which ensured the immortality of his fame.

Boyle's first published work had been a devotional tract entitled *Seraphick Love*, or *Some Motives and Incentives to the Love of God*, and dated 1658. His last book, called *A Free Discourse against Swearing*, was published after his death in 1695, though written in his youth. This was his 42nd book, and he had contributed in addition 35 papers to the *Transactions* of the Royal Society. Of the 42 books, 30 were scientific treatises, the remainder being theological or philosophical works. Nearly every one of his scientific works contains something of first-rate or considerable importance, and you may thus begin to get some idea of Boyle's total contribution to the progress of human thought and knowledge.

It is impossible to classify Boyle's works in any satisfactory scheme, since each book is apt to contain a medley of observations in different branches of science. There was, indeed, a wonderful amateurishness (as we should now regard it) about all his methods and writings. His mind was so actively bubbling with ideas, and the results of his experiments so fruitful, that he did not always trouble to sort out his subjects, to arrange his protocols, or even to correct his proofs! When a book was already in type he would have afterthoughts which had to be inserted, pages had to be cancelled, and the tracts of which the book was composed to be re-arranged. Some of the volumes thus became the despair of the contemporary binders, and are now the agonizing delight of collectors and bibliographers. In certain instances it is hardly possible to find two copies exactly alike, or to establish a standard of bibliographical finality.

Boyle's literary style was discursive and colloquial, and he constantly introduced personal irrelevancies into serious scientific treatises in a manner which would certainly shock most modern scientific consciences, because it is now the custom for science to divorce itself from humanity. Boyle's irrepressible humanity is manifested over and over again in the very titles of his books, as you will presently hear, and it has undoubtedly resulted more than once in obscuring the originality of his thought, since only a very careful reader can penetrate to the essence of his message. This may seem to be a defect in Boyle's scientific character, but there is no doubt that his methods endeared him to his contemporaries, and that his books found a far wider public

than a drier exposition would have done. Amusing proof of this is to be found in Pepys's comments on Boyle's *Hydrostatical Paradoxes*, which he read during his journeys up the Thames, always with delight, though confessing that he understood but little of their import.

Boyle was unquestionably a very honest recorder of the results of his work, and he is much concerned with doubts and difficulties. His book of *Physiological Essays* (1661) contains, indeed, a discourse on "The unsuccessfulness of Experiments," which may be taken as evidence of his veracity. Associated with his disinterested honesty is his disregard for questions of priority. Thus it was only the other day that Prof. Patterson, of Glasgow, set physiologists right as to who deserves to be remembered as the originator of the modern theory of respiration and combustion. For many years this has been attributed to John Mayow, an obscure Oxford graduate; but Prof. Patterson has shown that none of Mayow's ideas were original, all being borrowed from Boyle's works on *The Spring and Weight of the Air*, published several years earlier. I may quote from Boyle's chapter headed "A Digression containing some doubts touching respiration" as an example of his method and style. He is describing experiments on the effect of a vacuum on mice and birds, and observes: "Another Bird being within about half a minute cast into violent convulsions and reduc'd into a sprawling condition, upon the Exsuction of the Air, by the pitty of some Fair Lady's (related to your Lordship) who made me hastily let in some Air at the stop-cock, the gasping Animal was presently recovered, and in a condition to enjoy the benefit of the Lady's Compassion. And another time also, being resolv'd not to be interrupted in our Experiment, we did, at night, shut up a Bird in one of our small Receivers, and observ'd, that for a good while he so little felt the alteration of the Air, that he fell asleep with his head under his wing: and though he afterwards awak'd sick, yet he continued upon his legs between forty minutes and three quarters of an hour; after which, seeming nearly to expire, we took him out, and soon found him able to make use of the liberty we gave him for a compensation of his sufferings."

The nature of combustion Boyle examines in his books, *New Experiments touching the relation betwixt Flame and Air*, 1672, and *Suspicions about some Hidden Qualities in the Air*, 1674, and again, as Dr. Fulton points out, he must take precedence of Mayow.

Dr. Fulton concludes that Boyle approached the discovery of oxygen more closely than anyone before Priestly and Lavoisier. This led also to his consideration of the atomic theory which is contained in his three books, *The Sceptical Chymist*, 1661, *Certain Physiological Essays*, 1661 (which are for the most part not physiological in the modern sense, but physical), and *The Origine of Forms and Qualities*, 1666. *The Sceptical Chymist* is pronounced by Dr. Fulton to be one of the great books in the history of scientific thought, since it marks the transition from alchemy to modern chemistry. Boyle defined the element for the first time, distinguished mixtures from compounds, and made extraordinarily shrewd predictions about future chemical discoveries. Further observations of great importance on the properties of gases are contained in his *Essay on the Great Effect of Even, Languid and Unheeded Motion*, 1685, which is also an important treatise on thermodynamics; and finally he virtually enunciated the modern kinetic theory of gases in one of his last books, *The General History of the Air*, 1690.

Another book of great importance is *The Experimental History of Colours*, 1663, which, among a great variety of observations, anticipates some of Newton's generalizations in his treatise on *Optics*. Incidentally Boyle first discovered the change in colour of certain vegetable extracts when made acid or alkaline, and so introduced the use of chemical indicators.

In *The Experimental History of Cold*, 1665, Boyle first described the thermoscope or graduated thermometer, and proved that water expands when it freezes. He also made many interesting observations on the physiology of cold in regard to both man and animals, and showed that meat could be preserved from putrefaction by cold.

In *Hydrostatical Paradoxes*, 1666, he establishes many facts about liquids, including the transmission of pressure equally in all directions, experimenting on tadpoles, to prove his point that divers need not fear the greatest depths.

In his *Origin of Formes and Qualities*, 1666, he made advances of the greatest importance towards the Newtonian conception of light and in the theory of the nature of matter, and these questions were further developed in a volume of *Tracts*, 1671, the first of which is called *The Cosmicall Qualities of Things*. He discourses also about *The Temperature of the Subterraneall Regions*, and writes some *Relations about the Bottome of the Sea*.

In 1672 he published a book entitled *An Essay about the Origine and Virtues of Gems*. This engaging title really covers the first serious essay in the science of crystallography, for he elucidates origin and structure of crystals, which he had even examined in diamonds under the microscope, and rightly ascribes their colours to the admixture of small quantities of metal. As regards the medicinal properties of gems he is cautious,

pointing out that before any such properties are dismissed it should be proved that objects passing through the human body without sensible change of bulk can have no influence. "For, we know," he adds, "that some Chymists make Bullets of the *Regulus* of Antimony which they call *Pilulæ perpetuæ*, because when they have performed their operation in the body, and have been ejected with the Excrements, they are by some more thrifty than cleanly persons, washed and employed again and again to the former purposes." There are many other interesting and amusing observations in this book on the contemporary practice of medicine.

It is difficult to pass rapidly over any of Boyle's scientific works. It might have been supposed that we need not carefully examine a work entitled *Tracts consisting of Observations about the Saltness of the Sea: An Account of a Statical Hygroscope and its Uses: Together with an Appendix about the Force of the Air's Moisture: A Fragment about the Natural and Preternatural State of Bodies. To all which is premis'd a Sceptical Dialogue About the Positive or Privative Nature of Cold.* Yet here we find important observations on the lowering of temperature by mixing vinegar and salt of tartar, and its accurate measurement with a spirit thermometer. Also very practical experiments on the problem of making sea-water fit for drinking by sailors.

Boyle's next book, *Experiments, Notes, &c. about the Mechanical Origine or Production of divers particular Qualities*, 1675, is again of the very greatest interest. It contains a number of tracts, including two on electricity and magnetism, which are accepted as original contributions of first-rate importance. Dr. Fulton claims that the term "electricity" was first brought into common usage by Boyle, if not actually invented by him. In the same book are the first monographs in physiological literature dealing with the special senses of taste and smell.

It would be difficult to predict what discoveries Boyle announced in his two tracts entitled *The Aerial Noctiluca*, 1680, and *The Icy Noctiluca*, 1682. They are, of course, treatises on the phenomena of phosphorescence, or, as he calls it, *A Process of a factitious Self-shining Substance*, and you will not be surprised, by this stage of my discourse, to learn that he was almost certainly the first scientist to isolate phosphorus, making it from urine, to prove that it was an element, and to make the fundamental observation that phosphorescence ceases in a vacuum.

We are next translated to the realm of almost pure physiology. In 1684 Boyle published his *Memoirs for the Natural History of Humane Blood*, and this can justly be said to mark the starting-point of physiological chemistry. He first describes the physical properties of whole blood, serum and corpuscles, and then considers various problems, such as the differences between serum and the red part of blood, its chemical analysis and uses, and the differences between the bloods of men, animals, birds, fishes and sanguineous insects. He discusses some of the similarities between blood and urine, and in a series of experiments investigates anticoagulants. Blood was easily obtained for his investigations, for as he says, he only had to go at any time to a barber's shop to obtain a few ounces of freshly let blood. The book also contains a series of headings for a similar account of urine, but this was never completed.

Physiology is taken a stage further in Boyle's next book, *Experiments and Considerations about the Porosity of Bodies*, 1684, for this is nothing more than the first published account of osmosis and the passage of substances through living membranes. It includes observations on the absorption of medicines through the skin and through wounds, and describes an experiment on the Earl of Mount-Alexander, who had an unhealed thoracic wound, exposing, as Harvey years before had already told, his heart and lung. Boyle records that when his thorax was irrigated with medicated liquor or when aromatic substances were placed over the opening the Earl was quickly aware in his mouth of their taste and smell.

Since Boyle was an amateur scientist, the times in which he lived determined that he should also be an amateur physician. All his books abound with references to medical science, and Dr. Fulton claims that one of them entitles him to a distinguished place among the medical writers of the seventeenth century. This is a volume entitled *Of the Reconcileableness of Specifick Remedies to the Corpuscular Philosophy, To which is Annexed A Discourse about the Advantages of the Use of Simple Medicines*, 1685. He there examines the nature of specific remedies, and betrays a considerable knowledge of many common diseases, such as nephritis, heart failure and gangrene.

Of less importance is his later work, *Medicinal Experiments; or a Collection of Choice Remedies, for the most part Simple, and Easily Prepared*, 1692–1696. This work, while exhibiting Boyle's credulity in the face of the medical practice of his time, is a curious commentary on the state of that practice. But, as Dr. Fulton says, we should, in charity, "forget that he warmly recommended Paracelsus' receipt of pulverized human dung for sore eyes, and recall that he elected to take laudanum for toothache and linseed oil for burns."

In another work, *Experimenta et Observationes Physicæ*, 1691, there is another medical, or rather surgical, reference of great interest. For there he gives a detailed and accurate account of the effect of a depressed fracture

of the skull in the parietal region with an incomplete flaccid hemiplegia, and the immediate result of the removal of the spicule of depressed bone twenty-four weeks after the accident. Boyle did not, in consequence, describe the motor area of the brain, although in effect he had discovered it.

Boyle's interest in medical matters led him near the end of his life to write the first tract in English upon the determination of specific gravity. This was *Medicina Hydrostatica: or Hydrostaticks Applied to the Materia Medica. Shewing, how by the Weight that divers Bodies, us'd in Physic, have in Water, one may discover Whether they be Genuine or Adulterate*, 1690. The principle involved was not new, but Boyle first drew attention to its practical importance in physics and chemistry.

As Boyle grew older he naturally tended to express his matured views in works of a more general bearing. Thus in 1686 he published *A Free Enquiry into the Vulgarly Receiv'd Notion of Nature*, and this is one of his most important philosophical writings. In 1688 appeared another book, *A Disquisition about the Final Causes of Natural Things*, in which, Dr. Fulton says, Boyle "takes us into his confidence, and gives us briefly his *confessio fidei* as a biologist." The work is "essentially a plea for a teleological interpretation of natural phenomena," and it is filled with interesting observations in biology and physiology. An appendix to it on *Some Uncommon Observations about Vitiated Sight* sounds irrelevant, but it is of great interest to ophthalmologists, giving a variety of case-histories illustrating defects in sight in individuals whom Boyle had himself examined. He had, as he records elsewhere, once consulted Harvey about his own eyes, and perhaps the prime interest of this tract to us at the present time is the following paragraph:

"And I remember that when I asked our famous Harvey, in the only Discourse I had with him, (which was but a while before he dyed) What were the things that induc'd him to think of a *Circulation of the Blood?* He answer'd me, that when he took notice that the Valves in the Veins of so many several Parts of the Body, were so Plac'd that they gave free passage to the Blood towards the Heart, but oppos'd the passage of the Venal Blood the Contrary Way: He was invited to imagine, that so Provident a Cause as Nature had not so Plac'd so many Valves without Design: and no Design seem'd more probable, than That, since the Blood could not well, because of the interposing Valves, be sent by the Veins to the Limbs: it should be sent through the Arteries, and Return through the Veins, whose Valves did not oppose its course that way. . . ."

So through the mouth of Boyle we are come again to the beginning with a living memory of the words of William Harvey, the true source of all experimental, and therefore of most modern, knowledge.

I have mentioned of Boyle's work enough, I hope, to take your breath away and perhaps enough to weary you. But even so I have omitted several of his scientific works and all his theological works, with his entertaining discourse, *About the possibility of the Resurrection*, 1675, which includes reflections on the difficulties which would result in the case of a man eaten by a cannibal.

I have said nothing of his wonderfully naïve volume of *Occasional Reflections*, 1665, upon such subjects as "Sitting at ease in a Coach that went very fast," "Upon his paring of a rare Summer-apple, "Upon the prodigiously wet weather," "Upon the sight of a fair Milk-Maid singing to her cow," "Seeing a Child picking the plums out of a piece of Cake his Mother had given him for his breakfast," and so on; or of his 35 contributions to the *Transactions* of the Royal Society, which include papers on blood transfusion, monsters, preservation of specimens in alcohol, sunspots phosphorescence in meat, ambergris, rot in sheep, air-bladders in fishes, and many other subjects already mentioned in his books. I have not revealed that he published in 1678 a treatise on transmutation entitled *An Account of a Degradation of Gold Made by an Anti-elixir; a strange Chymical Narrative.* Boyle, after all, was human, whatever I may have said to give you the impression that he was superhuman, and some degree of credulity is to be found associated with the greatest intellects.

I hope I have convinced you of the reality of the "kind of ferment" that was working in Boyle's mind, and of his claim to be remembered as one of "the enlarged and Elastical souls of the world," and therefore as one of the great masters in experimental science.

ST. DAMIAN.

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A CASE OF INTRACRANIAL ARTERIO-VENOUS ANEURYSM OF TRAUMATIC ORIGIN.

THE *rôle* played by trauma in the production of aneurysm of the intracranial arteries is uncommon, while the literature is disappointingly barren. Having read Dr. Hinds Howell's interesting "Notes on Cerebral Aneurysm" in the April issue of the JOURNAL, I have been prompted to describe what I believe to be an instance of the production of an arterio-venous aneurysm of the cavernous sinus and internal carotid artery resulting from an injury.

The present case bears some resemblance to one reported by Rollett and Cobrat (1), the development of ocular palsies and proptosis being significant features in both.

In his article Dr. Hinds Howell lays stress upon the fact that a bruit within the skull is practically never to be heard with a true aneurysm, but is usually present in the case of arterio-venous aneurysm. It was a feature of Birley's case, which he quotes, as it was in this present one.

Birley (6) has given us a valuable critical study of a case of traumatic aneurysm of the intracranial portion of the internal carotid artery in which it became necessary to ligature the common and external carotid arteries on the affected side, and includes a note on the surgical aspect by Wilfred Trotter.

REPORT OF CASE.

A farm labourer, æt. 54, had been knocked down by a car three weeks before coming under observation. He received a fracture of the left clavicle and some ribs, and in addition a ragged cut under the left eye which required suturing.

A few days before being seen he developed paresis of the left external rectus, while the left eye became "blood-shot" and painful. There was an associated supraorbital pain and nausea.

There was found to be complete paralysis of the left sixth nerve with diplopia to the left. Along the inferior bony margin of the orbit was an unhealthy granulating wound where the sutures had evidently given way. The left pupil was sluggish in reacting to light, slightly irregular but not dilated. The disc was pale and somewhat cupped, while the retinal veins were engorged. Visual acuity of that eye was only $\frac{6}{36}$. There was no proptosis, and no involvement of cranial nerves other than the left sixth. His general condition was poor, but there was no evidence of arterial disease.

Under local anæsthesia the margin and base of the wound were excised and the wound closed by a subcuticular suture.

Two weeks later, on discharge, the wound was healed but the ocular palsy remained unchanged.

One month later he again came under observation because of the sudden development of severe chemosis of the conjunctiva of the lower fornix, associated with the onset of severe pain over the left frontal region.

The lower conjunctival fornix was now found to be obliterated by œdematous and greatly thickened conjunctiva, which protruded from between the lids, preventing their closure. The whole of the bulbar conjunctiva was very markedly injected. Exophthalmos was now a prominent feature, but this was not of the pulsating variety. The tension of the eye was raised, while the appearance of the fundus remained as before.

The sixth nerve palsy had now been replaced by complete ophthalmoplegia, both external and internal, while the visual acuity had fallen to counting fingers at 4 ft.

An X-ray suggested some opacity of the left orbital shadow; the Wassermann reaction was negative, and no abnormality of the nasal sinuses was found.

Taking into consideration the continuous and severe nature of the pain, together with the evidence of chronic glaucoma and the economic problem resulting from the probable loss of employment entailed by a prolonged absence from work, it was decided to enucleate the eye.

Tenon's capsule having been opened there was a sudden and copious hæmorrhage, which was venous in appearance. The globe was freed from its attachments as speedily as possible, and the hæmorrhage checked by plugging the socket. The orbit was expeditiously explored with the finger, but without discovering anything abnormal.

The plugging was cautiously removed after forty-eight hours without the occurrence of any fresh hæmorrhage.

Subsequent progress was marked by the patient complaining of noisy pulsations in the head. Auscultation over the head revealed a loud and resonating bruit synchronous with the pulse. This bruit gradually disappeared during the week following operation, and the patient returned to his home three weeks after operation with a healthy socket and free from symptoms.

DISCUSSION.

The particular point of interest was the long latent period between the original trauma and the development of the proptosis. It is probable that the progressive nature of the affection with the development of the

proptosis and ophthalmoplegia is to be explained as a leakage from an aneurysm of the internal carotid or ophthalmic artery, causing a retrobulbar hæmatoma, while the bruit heard following the operation owes its origin to the conversion of a simple aneurysm into an arterio-venous one with the cavernous sinus. This then underwent spontaneous cure.

In conclusion it may not be out of place to refer briefly to the relationship of ocular palsies and aneurysms of the basal arteries.

Pfingst and Spirling (2) have considered fully the *rôle* of aneurysms in the production of ocular palsies, and quote statistics to show relative frequency of their occurrence. Fearnsides, in 1916, in a series of autopsies which disclosed the presence of cerebral aneurysms, notes that the clinical histories indicated in most instances involvement of the motor nerves of the eye, but considers that only those cases where a leak has occurred manifest symptoms due to pressure.

Paton (3) quotes Uhthoff as stating that ocular palsies are present in 70% of cases, and in more than half of them the third nerve is affected.

Paton (4) himself affirms that "It is difficult to say whether any ocular symptoms have been produced by unruptured aneurysms of the basal arteries. They certainly have not been diagnosed during life."

Yet Mr. Foster Moore (5) reports a case where such a clinical diagnosis was made, and confirmed subsequently at autopsy.

I wish to express my indebtedness to Mr. Conroy Dixon for his kindness in allowing me to make use of the notes of his case.

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C. B. V. TAIT.

SOME OBSERVATIONS UPON A CASE OF ACUTE NEPHRITIS, FOLLOWING AN ACUTE CELLULITIS OF THE HAND AND FOREARM.

THE ætiology of a case of acute nephritis is usually obscure. It is believed by some observers that the most common cause is the presence, elsewhere in the body, of some focus of bacterial infection, and that the kidney lesion arises as a complication. That the primary focus is often not found is unfortunate, and this has caused many to doubt that a focal infection is the cause of the condition. The following case, however, serves as an excellent example of an acute nephritis arising in the course of an acute pyogenic infection.

B. D—, æt. 19, fisherman, was admitted to hospital on January 16th, 1930, with an acute staphylococcal infection of the tendon-sheaths and deep tissues of the left hand and forearm. The history was that a piece of wire hawser was run into the palm of the hand 11 days previously, and that 6 days before admission a tender swelling in the palm had been opened by the ship's captain. On admission the boy looked flushed and ill. The left hand was hot, red, tender and swollen; there was fluctuation all over the palm. Active movements of the digits were possible but very painful. There was a small infected wound in the palm near the base of the third digit; the left forearm was a little swollen and tender, but did not fluctuate; several enlarged and tender glands were felt in the left axilla. The temperature was 103·2—the pulse 120, respirations 24. The urine contained no albumen.

Directly after admission free incisions were made into the palm of the hand and drainage established; further operations upon the hand and forearm were performed on the 5th and 15th days after admission. One month after admission albumen was first noticed in the urine, and 4 days later well-marked œdema of the face, back and legs was present. The urine was then red, and contained 7300 red blood-cells per c.mm.; there was 0·015 grm. of albumen per 100 c.c. of urine; casts were present. The blood-urea was 128 mgrm. per 100 c.c. of blood, thus showing that the kidney was seriously damaged. Cultures of the urine showed a profuse growth of *Staphylococcus aureus*. A diet containing 60 grm. of protein, 300 grm. of carbohydrate and 100 grm. of fat was given. No meat was allowed, and the fluid intake was restricted to 40 oz. in the 24 hours. Two days after the appearance of the blood and albumen in the urine all the incisions were enlarged; the necrosed

head of the hamate bone was removed and the antecubital fossa was opened and drained.

Notwithstanding this fresh drainage operation, the blood-urea, which was being estimated frequently, continued to rise quickly, and reached 158 mgrm.% on February 28th, 1930 (Fig. 1). At this point, however, the rise became less steep, so that on March 3rd, 1930, when the question of amputation of the arm was considered, it was decided that the check in the rise of the blood-urea was sufficient justification for postponing operation. Unfortunately the lull was only a temporary one, and on March 8th, 1930, the blood-urea had risen to 266 mgrm. %. By this time the condition of the wounds was so much improved that amputation was not considered. It fell equally suddenly to 232 mgrm. % during the next two days, and then more gradually for two further days. The patient then complained of sore throat. On March 19th, 1930, the blood-urea reached 248 mgrm. %. From this point, however, with the recovery of the sore throat, and following the drainage of a pocket of pus over the internal epicondyle and the transfusion of 600 c.c. of citrated blood, there was a dramatic fall in the blood-urea to 140 mgrm. % in 12 days. This fall was absolutely uniform at the rate of 9 mgrm.% every day for 12 days. The patient then again complained of sore throat, and the tonsils were red and inflamed; this event corresponded with a slackening in the rate of fall of the blood-urea.

The anæmia was still profound—hæmoglobin 35%, red cells 2,450,000 per c.mm., and a second transfusion of 550 c.c. of citrated blood was given. This produced a rise in the hæmoglobin to 42%, and in the red cells to 3,040,000 per c.mm. One week later, the local condition of the hand being stationary, the wound was explored, and a sequestrum removed from the radius. This procedure was again followed by a rapid fall in the blood-urea, but this only lasted for 3 days, when there was a recrudescence of the sore throat, and a consequent slackening in the rate of fall.

With the primary focus of infection almost healed, and the throat condition held in check, the blood-urea then continued to fall slowly, save for one small rise.

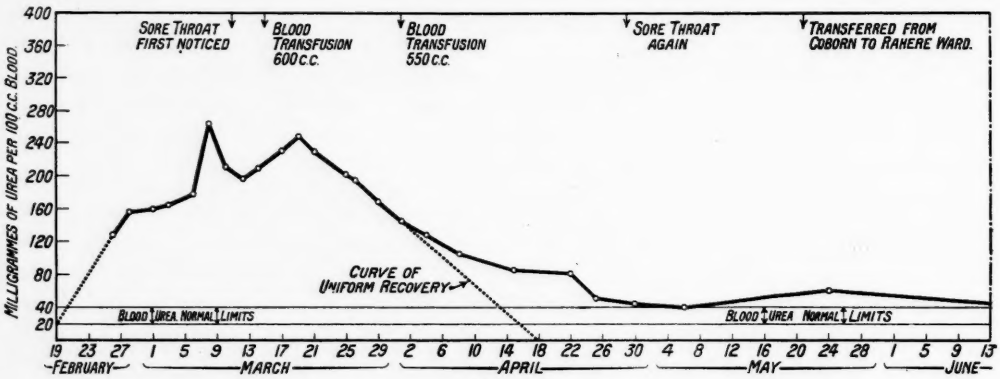

FIG 1.

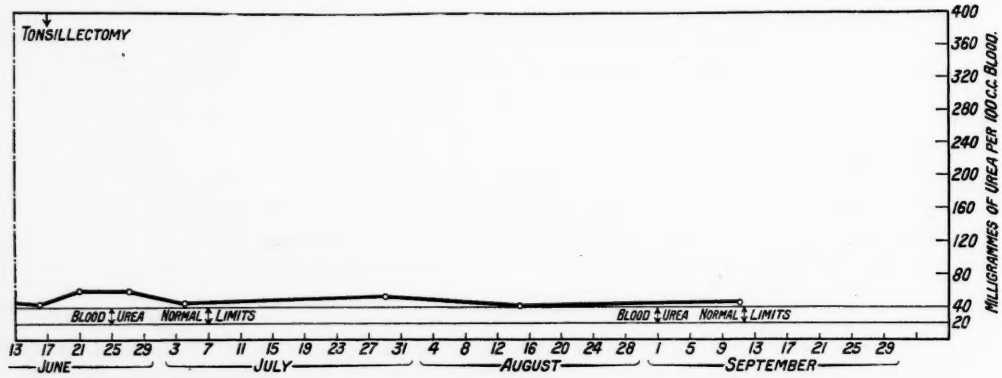

FIG 2.

This coincided with the appearance in the urine of *Bacillus coli communis*, which grew abundantly, to the complete exclusion of the staphylococci. Tonsillectomy was performed at this stage, as the tonsils were definitely infected.

The passing of the acute stage of the nephritis was marked by the gradual disappearance of the red cells from the urine. The greatest number recorded was on March 1st, 1930, when there were 7400 red cells per c.mm. in the urine. On May 27th, 1930, they had fallen to 5300 per c.mm. The *B. coli* infection persisted, in spite of the fact that the urine was kept alkaline throughout the 24 hours with potassium citrate—40 gr. 4-hourly.

When the number of red blood-cells in the urine had fallen to less than 10 per $\frac{1}{6}$-in. field microscopically, the urine was made acid with acid sodium phosphate, and kept so for 48 hours before hexamine was given as well. Within 2 days the urine, which had previously been turbid and highly offensive, became clear and lost its fishy odour. The hexamine administration was continued for one week, when a large amount of blood appeared in the urine. A prompt return to potassium citrate, however, very quickly stopped the hæmorrhage, and the urine subsequently remained clear and non-offensive.

The present condition of the patient is that he has severely damaged kidneys, with a blood-urea just above the upper limit of normal and a crippled left hand, for, apart from the deformity produced by the extensive ulceration, there is an ulnar paralysis. An attempt was made to remedy the latter by suture of the nerve, but in the hand no trace of the nerve could be found, although its upper end was traced down into a mass of fibrous tissue in the upper part of the palm. He is still anæmic in spite of treatment, the last examination giving him only 50% of hæmoglobin and 3,900,000 red cells per c.mm.

CONCLUSIONS.

The foregoing account illustrates several points in connection with the ætiology, diagnosis and prognosis of acute nephritis:

(1) An acute nephritis may arise as a sequel to a focus of bacterial infection elsewhere in the body. In this case an acute staphylococcal cellulitis of the hand and forearm was followed within three weeks by an acute nephritis with staphylococci in the urine, which, although not rare, is certainly very much less common than the more usual streptococcal infection.

(2) Repeated urine examination in any case of acute focal infection is of the first importance.

(3) Frequent blood-urea estimations are of great value in determining the progress and the immediate or ultimate prognosis of acute nephritis.

(4) Adequate treatment of the primary focus of infection will help to bring about recovery in a case of acute nephritis, but if any focus, however slight, still remains in the body, the recovery will be retarded.

(5) Hexamine, correctly administered, together with acid sodium phosphate, is a valuable urinary antiseptic in some cases.

I have to thank Dr. Graham and Mr. Roberts for permission to publish the case, and Dr. Harrison and Dr. Archer for the estimations of the blood-urea, and my colleague, Mr. Richards, for the extracts of the notes on the surgical condition.

C. B. PROWSE.

ANNUAL ATHLETIC SPORTS.

The only record that was broken at the Annual Athletic Sports was that there was a larger rainfall during the afternoon of Saturday, May 28th, than probably on any other Bart.'s Sports Day. The track, of course, was so sodden that even with long spikes it was difficult to maintain a foot-hold, and this affected the length of stride. Thus any times taken were no criterion of individual ability. However, in spite of such misfortune with the weather, we were pleased to see about 40 visitors who were undaunted by the conditions, and took enough interest in Bart.'s Athletics to make their way to the Winchmore Hill ground. We were particularly grateful to Mrs. Girling Ball who kindly distributed the cups and medals at the conclusion of the meeting.

Perhaps the outstanding athlete of the day was J. G. Nel, who won both the 100 Yards in $11\frac{1}{5}$ sec. and 220 Yards in $24\frac{3}{5}$ sec., although in the latter race he only just caught T. L. Benson on the tape. J. R. Strong and J. W. Perrott dead-heated in the Mile after a very slow first three laps, the two racing in together in the last 100 yards. The conditions suited our cross-country men, H. B. Lee and G. Dalley, in the $\frac{1}{2}$-Mile handicap. Both Perrott and Strong failed to catch them, giving a 40 yards' allowance, and Lee won comfortably from Dalley in 2 min. $7\frac{1}{5}$ sec. W. H. Jopling, the holder, retained the $\frac{1}{4}$-Mile in 58 sec. He showed an excellent judgment of pace, and won without much difficulty.

Of the field events, C. M. Dransfield's javelin throw of 123 ft. was the best performance under the conditions, although K. W. Martin cleared 10 ft. 3 in. into a flooded sand-pit in the Pole Vault, while J. S. Smart carried off the High Jump at 5 ft. $1\frac{1}{2}$ in.

The Inter-Club Relay, which is always a favourite and exciting event, resulted in the three Rugger teams which had entered finishing 1st, 2nd, and 3rd. The "B" XV representatives won easily from the "A" XV, closely followed by the "Extra A."

The heats of the 440 Yards and 220 Yards were run on the previous Monday at Winchmore Hill under very much better conditions. J. R. Strong also retained his 3-Mile title in 16 min. 17 sec. A. I. Kinnear, whose cross-country performances have been decidedly promising, was only narrowly beaten after a great last-lap race, in which he overtook Strong and looked like winning, but was outpaced in the finishing "straight."

It was decided to hold the 120 Yards Hurdles and Long Jump finals at a later date, and these were decided at Stamford Bridge on Tuesday, May 31st.

There has not been such a wealth of athletic ability among the freshmen this year as of recent years, yet there are one or two who show an undaunted enthusiasm, which should result in good performances next year. We are, however, extremely fortunate in having K. W. Martin, the Cambridge Blue, with us this year. His Pole Vaulting, together with J. S. Smart's High Jumping, will be of

the greatest assistance to us both in Inter-Hospital Sports and in matches.

In conclusion we should like to express our gratitude to all those officials who so kindly turned out in a continuous downpour, and helped to make our Annual Sports a success.

RESULTS.

100 Yards: 1, J. G. Nel; 2, W. H. Jopling. Won by 2 yards. Time, 11⅕ sec.

220 Yards: 1, J. G. Nel; 2, T. L. Benson; 3, W. H. Jopling. Won by 1 ft. Time, 24⅗ sec.

440 Yards: 1, W. H. Jopling; 2, J. W. Perrott; 3, G. A. Fairley-Clarke. Won by 7 yards. Time, 58⅕ sec.

880 Yards Handicap: 1, H. B. Lee (40 yards); 2, G. Dalley (40 yards); 3, J. W. Perrott (scr.). Won by 10 yards. Time, 2 min. 7⅗ sec.

1 Mile: 1, J. R. Strong and J. W. Perrott; 3, H. B. Lee. Won by 15 yards. Time, 5 min. 5⅗ sec.

3 Miles: 1, J. R. Strong; 2, A. I. Kinnear; 3, H. B. Lee. Won by 5 yards. Time, 16 min. 17 sec.

120 Yards Hurdles: 1, W. D. Colthart; 2, H. W. Rodgers. Won by 1½ yards. Time, 17⅕ sec.

High Jump: 1, J. S. Smart; 2, K. W. Martin; 3, F. W. Rushby. Height, 5 ft. 1½ in.

Long Jump: 1, R. E. Gibson; 2, J. G. Nel. Distance, 19 ft. 10 in.

Pole Vault: 1, K. W. Martin; 2, J. Shields. Height, 10 ft. 3 in.

Putting the Weight: 1, J. S. Smart and R. T. Simcox. Distance, 31 ft. 7 in.

Throwing the Javelin: 1, C. M. Dransfield; 2, E. E. Harris; 3, G. Dalley. Distance, 123 ft.

120 Yards Handicap: 1, B. A. Thomas; 2, F. W. Rushby. Won by 2 ft. Time, 13 sec.

Inter-Club Relay, 4 × 220 Yards: 1, Rugger "B" (W. H. Jopling, R. T. Simcox, T. P. Storey, T. L. Benson); 2, Rugger "A" (G. A. Fairley-Clarke, J. W. Cope, C. M. Dransfield, J. W. Perrott); 3, Rugger "Extra A."

J. W. P.

INTER-HOSPITAL SPORTS.

The Inter-Hospital Sports were held at the White City Stadium on Wednesday, June 8th. The ideal weather and the excellence of the track made the afternoon a most enjoyable one, and though no new records were established, the usual high standard was maintained. Bart.'s captured three first places through J. R. Strong, C. M. Dransfield and K. W. Martin, and won the Mile Relay Race for the tenth year in succession. The Relay Race was a memorable one, for the team (J. R. Strong, W. H. Jopling, J. R. Hill and G. J. Nel) recorded 3 min. 44⅗ sec., only ⅕ sec. slower than the record of 1923.

St. Thomas's Hospital won the Shield with 54 points, and Bart.'s were runners-up with 42 points. St. Mary's scored 23 points, and King's scored 21.

RESULTS.

100 Yards: J. R. J. Rinkel (St. Thomas's), 1; J. R. Hill (St. Bartholomew's), 2; R. W. Purser (St. Thomas's), 3; J. G. Nel (St. Bartholomew's), 4. Time, 10⅖ sec.

220 Yards: L. R. J. Rinkel (St. Thomas's), 1; J. E. Read (King's), 2; J. G. Nel (St. Bartholomew's), 3; W. A. Groom (Guy's), 4. Time, 23⅕ sec.

440 Yards: A. T. Marrable (St. Thomas's), 1; C. W. Claydon (King's), 2; W. H. Jopling (St. Bartholomew's), 3; A. G. Brown (Guy's), 4. Time, 52 3/10 sec.

880 Yards: T. B. L. Bryan (Mary's), 1; C. W. Claydon (King's), 2; J. W. Perrott (St. Bartholomew's), 3; W. G. S. Lawson (St. Thomas's), 4. Time, 2 min. 0½ sec.

1 Mile: T. B. L. Bryan (St. Mary's), 1; J. R. Strong (St. Bartholomew's), 2; H. M. Lester (King's), 3; I. G. Robin (Guy's), 4. Time, 4 min. 35 sec.

3 Miles: J. R. Strong (St. Bartholomew's), 1; R. S. Morris (St. Thomas's), 2; P. M. Smyth (London), 3. Time, 15 min. 45 sec.

440 Yards Hurdles: R. S. Richmond (St. Mary's), 1; R. T. Norman (St. Thomas's), 2; T. L. Benson (St. Bartholomew's), 3; J. F. E. Bloss (St. Thomas's), 4. Time, 59 3/10 sec.

120 Yards Hurdles: J. F. E. Bloss (St. Thomas's), 1; G. J. McFarlane (St. Thomas's), 2; E. Evelyn (Guy's), 3; D. Kamil (St. Mary's), 4. Time, 17⅖ sec.

Pole Vault: K. W. Martin (St. Bartholomew's) and H. H. Bayley (King's), 1; R. H. Bailey (King's), 3; J. Shields (St. Bartholomew's); 4. Height, 10 ft. 6 in.

High Jump: A. R. Le Fleming (St. Thomas's), 1; J. Smart (St. Bartholomew's), 2; L. C. Revell (Guy's) and J. Organe (Westminster), 3. Height, 5 ft. 7½ in.

Long Jump: A. T. Marrable (St. Thomas's), 1; G. S. Organe (Westminster), 2; L. T. Bond (St. Thomas's), 3; J. G. Youngman (St. Bartholomew's), 4. Distance, 20 ft. 4¾ in.

Putting the Weight: C. E. Elliott (St. George's), 1; J. G. Anderton. (Westminster), 2; G. D. Wedd (St. Bartholomew's), 3; M. W. Lloyd-Owen (St. Mary's), 4. Distance, 40 ft. 1½ in.

Throwing the Javelin: C. M. Dransfield (St. Bartholomew's), 1; W. L. Kerr (King's), 2; M. W. Lloyd-Owen (St. Mary's), 3; L. T. Bond (St. Thomas's), 4. Distance, 136 ft. 5 in.

Relay: St. Bartholomew's, 1 (J. R. Strong, W. H. Jopling, J. R. Hill, J. G. Nel); St. Thomas's, 2; St. Mary's, 3; Westminster, 4. Time, 3 min. 44⅗ sec.

Tug-of-War: Winners: St. Thomas's. Runners-up: St. Mary's.

STUDENTS' UNION.

CRICKET CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* M.C.C.

On May 26th at Winchmore Hill. Lost by 9 runs.

The M.C.C. batted on the first hard wicket of the season. We did well to dismiss them for 102, Hay-Shunker bowling well, taking 4 wickets for 27.

Our batting was bad. Wedd, making 33 (including one 6), was playing well when he ran himself out. The last three wickets fell for 13 runs and we lost by 9 runs.

CUP TIE.

ST. BARTHOLOMEW'S HOSPITAL *v.* ST. MARY'S HOSPITAL.

Our second round Cup match, *v.* St. Mary's Hospital, was played at Winchmore Hill on June 1st. We won by 2 wickets.

Mary's batted first. Goodwin batted well for 45. Wedd, 5 for 53, and Hay-Shunker, 4 for 29, took the wickets. Gabb held two good catches. We had a full side except for Mundy.

We then went in an hour before tea. Wickets fell quickly through rank bad batting, 6 wickets down for 22, then 8 wickets for 44 at tea. Hindley and Hay-Shunker then went for the bowling and runs came quickly. Both batted confidently, Hindley scoring very freely. Between them they turned what looked like certain defeat into a very good win, both being undefeated at the end.

Scores:

ST. MARY'S HOSPITAL.		ST. BARTHOLOMEW'S HOSPITAL.	
Stinerson, c Gabb, b Wedd	18	Boney, lbw, b Goodwin	7
Walters, b Gabb	21	Masina, b Goodwin	3
Carnegie-Brown, b Wedd	20	Gabb, b Carnegie-Brown	5
Goodwin, c Boney, b Wedd	45	Wedd, c Cockburn, b Carnegie-Brown	0
Morgan, c Gabb, b Hay-Shunker	3	Nunn, b Carnegie-Brown	2
Gideon, c Hindley, b Hay-Shunker	0	Hindley, not out	80
Richmond, b Wedd	4	Rait-Smith, b Carnegie-Brown	0
Cockburn, b Wedd	0	Anderson, b Carnegie-Brown	6
Parry, b Hay-Shunker	7	Wilson, b Goodwin	0
Cooper, lbw, h Hay-Shunker	8	Hay-Shunker, not out	33
Corbin, not out	3	Bamford, did not bat.	
Extras	14	Extras	15
Total	143	Total (for 8 wkts.)	151

The annual " Past *v.* Present " match was played at Winchmore Hill on June 11th.

The " Present " batted first. Wheeler and Boney opened in the absence of Nunn, and put on 83 for the first wicket. Wheeler continued to bat well, making a good 75, Wedd making 25, including a 6 on to the pavilion roof. Gabb hit hard for a useful 53. The " Present " declared their innings closed an hour before tea. For the " Past " Mackie and Maingot put on 33 for the first wicket. Maingot batted steadily. Melle, the old Hampshire player, hit hard for 24. Maley offered stubborn resistance and was undefeated. Phillips, last man in, with two overs to go, had no difficulty in playing out time. Comic relief was supplied by Gabb chasing a dog (the property of one of the " Past "), round the field, who took a liking to the ball, while the batsmen ran an energetic six.

Dr. Wilfred Shaw and Mr. H. E. G. Boyle very kindly umpired. In addition we were very pleased to see Mr. Wilson, Mr. Girling Ball and Prof. Kettle.

Match drawn. Scores:

PRESENT.		PAST.	
A. R. Boney, b Parrish	28	K. M. Mackie, b Hay-Shunker	13
F. E. Wheeler, b Parrish	75	R. Maingot, c Anderson, b Wedd	32
G. T. Hindley, run out	5	B. G. Melle, c Capper, b Wedd	24
G. D. Wedd, c Maley, b Melle	25	R. G. Gilbert, c Anderson, b Hay-Shunker	17
W. H. Gabb, c Bourne, b Taylor	53	W. Gaisford, c Capper, b Anderson	14
J. D. Anderson, b Melle	2	G. Bourne, b Gabb	2
W. M. Capper, b Maley	9	J. Parrish, b Hay-Shunker	11
C. C. Hay-Shunker, b Maley	4	M. L. Maley, not out	24
R. Mundy, not out	5	D. M. Dean, b Mundy	8
J. D. Wilson, not out	4	J. T. C. Taylor, b Gabb	9
J. B. Bamford, did not bat.		R. F. Phillips, not out	0
		Extras	21
Extras	24		
Total (for 8 wkts. dec.)	234	Total (for 9 wkts.)	175

ST. BARTHOLOMEW'S HOSPITAL *v.* GUY'S HOSPITAL.

We played a half-day game *v.* Guy's at Honor Oak on Wednesday, June 15th. Owing to the Cambridge and Oxford exams., slackness, and quite an unexplainable, unbelievable and unnatural keenness for work on a perfect summer afternoon, our team included ten 2nd XI men. We batted first on a perfect batsman's wicket and were dismissed for 81, the whole side being bowled. Guy's went in and knocked off the runs with loss of 2 wickets, thus winning by 8 wickets.

ST. BARTHOLOMEW'S HOSPITAL *v.* THE OLD PAULINES.

Played at Thames Ditton on Saturday, June 18th, on a very fast ground in ideal weather. We lost the toss. The Old Paulines batted first. Mundy and Dolly bowled unchanged for us. Mundy, bowling magnificently, took 9 wickets for 43 against a good side on a perfect batsman's wicket, Dolly at the other end keeping a good length and the runs down. The Old Paulines were 81 for 5 wickets at lunch after 110 minutes' batting. After lunch Mundy continued to bowl well, taking the last 3 wickets in four balls. Set 97 to get, Boney and Masina opened confidently, but were soon separated, and the side collapsed, 61 for 6 wickets. Wade then batted perfectly while Bamford kept his end up and the Paulines' score was passed. Thus we won by 4 wickets. Wade continued to bat well and made a delightful 75; Bamford made 32. Eventually we made 191. This was a very creditable win, due entirely to Mundy's bowling and Wade's batting, especially as six 2nd XI men were playing.

J. B. B.

2ND XI.

The most noteworthy feature of Hospital cricketing activities has been the continued success of the 2nd XI. Since our auspicious opening each game has been marked by some creditable performance, and the whole augurs well for coming seasons. The batting and fielding have been particularly sound, and the gaiety and spirit of our team is unusually high.

ST. BARTHOLOMEW'S HOSPITAL *v.* HORNSEY GRANGE.

Played at home on Saturday, May 21st.

The soft wicket was responsible for some low scoring, Bart.'s making 95 and the opposition 70. Capper made 33 and Dransfield 22. Walch (3 for 19) and Dransfield (4 for 10) shared the bowling honours.

ST. BARTHOLOMEW'S HOSPITAL *v.* IMPERIAL COLLEGE.

Played at Winchmore Hill. The late arrival of the visitors entailed curtailment of play, but this was neutralized by our quick scoring. On going in to bat the runs came very quickly, so that by tea we had declared our innings closed at 171 for 6.

The opening pair, Wedd and Dransfield, put on 95 for the first wicket before the latter was run out, Wedd in a particularly attractive knock making some fine off drives in amassing 74 runs. Dolly made 30 and Dransfield 27. The visitors were dismissed for 115 runs, one of the opening batsmen contributing 58. Wedd took 3 wickets for 38 and Dransfield 3 for 19.

ST. BARTHOLOMEW'S HOSPITAL *v.* SOUTHGATE.

Played at Winchmore Hill on Saturday, June 4th.

Our visitors being the only team we had not beaten, this match was awaited with interest. We batted first on a firm wicket, and consistent batting again placed us in an unassailable position. Each batsman made double figures, and the declaration total was a formidable one of 191 for 6, Hindley's innings of 63 being the outstanding feature.

The visitors found runs hard to get, and Wedd (5 for 23) and Hay-Shunker (4 for 19), bowling unchanged, dismissed them for 46. The bowling was backed up by bright fielding and Hunt's wicket-keeping was first class.

SECOND ROUND CUP-TIE.

ST. BARTHOLOMEW'S HOSPITAL *v.* ST. MARY'S.

Played at Winchmore Hill on Thursday, June 9th.

Again we had the fortune to bat first on a hard, fast wicket, and again our batting was consistently good.

Wade (43) and Dransfield (59) put on 102 for the first wicket—this, I believe, is a record in the second team annals—and Wheeler (55 not out) and Dolly (25) continued a high rate of scoring. The batsmen were essentially free-scoring, and a great total of 222 (for 5 wickets declared) was reached in 1 hour 58 minutes.

St. Mary's found run-getting less easy, and were dismissed for a total of 48. Mundy, in 12 overs, 6 of them maidens, took 6 wickets for 10 runs—truly a magnificent consistency. Gillman backed up well in taking 4 for 24. Wheeler's slip fielding was characteristic of the high standard maintained by the other members of the team.

TENNIS CLUB.

May 21st: 1st VI *v.* R.N.C. Greenwich. Home.

J. R. Blackburne and J. R. Kingdon lost to 1st pair, 2—6, 6—4, 9—8; beat 3rd pair, 6—2, 6—2.

F. J. Beilby and B. Thorne-Thorne lost to 1st pair, 4—6, 4—6; beat 2nd pair, 6—1, 3—6, 6—4.

O. A. Savage and P. J. Hardie beat 3rd pair, 6—1, 3—6, 6—4.

We were leading by 3—2 when rain stopped play.

May 21st: 3rd VI *v.* London Hospital. Away.

F. J. S. Baker and M. L. Nairac beat 1st pair, 6—1, 7—5; beat 2nd pair, 6—1, 6—4; beat 3rd pair, 6—2, 6—3.

R. L. Benison and R. K. Levick lost to 1st pair, 16—14, 2—6, 4—6.

I. N. Blusger and W. P. Shemilt beat 2nd pair, 6—1, 6—4; beat 3rd pair, 6—2, 6—3.

The other matches were stopped by rain, so we won 5—1.

May 25th: 2nd VI *v.* Guy's Hospital. Home.

R. C. Witt and E. M. Darmady beat 1st pair, 2—6, 6—2, 6—4; beat 2nd pair, 6—2, 2—6, 6—4.

K. J. Harvey and A. Innes beat 2nd pair, 16—14, 6—4; beat 3rd pair, 6—4, 6—4.

F. J. S. Baker and W. P. Shemilt beat 1st pair, 4—6, 6—4, 7—5; lost to 2nd pair, 4—6, 4—6; beat 3rd pair, 6—1, 7—9, 6—1.

Won, 6—1.

June 4th: 1st VI *v.* King's College Hospital. Away.

J. R. Blackburne and J. R. Kingdon beat 1st pair, 4—6, 8—6, 6—4; lost to 2nd pair, 4—6, 4—6; beat 3rd pair, 6—4, 6—1.

O. A. Savage and J. H. Hunt lost to 1st pair, 4—6, 4—6; lost to 2nd pair, 4—6, 4—6; beat 3rd pair, 6—3, 3—6, 6—1.

A. Papert and R. C. Witt lost to 1st pair, 4—6, 3—6; lost to 2nd pair, 4—6, 6—4, 6—8; beat 3rd pair, 6—4, 6—4.
Lost, 4—5.

June 4th: 2nd VI *v.* Beverley L.T.C. Home.
R. K. Levick and A. Innes beat 1st pair, 6—3, 6—4; lost to 2nd pair, 3—6, 2—6; beat 3rd pair, 6—1, 6—2.
R. L. Benison and F. J. S. Baker beat 1st pair, 6—4, 16—14; lost to 2nd pair, 4—6, 2—6; beat 3rd pair, 6—2, 6—2.
F. J. Beilby and E. M. Darmady beat 1st pair, 6—2, 6—2; lost to 2nd pair, 6—2, 5—7, 0—6; beat 3rd pair, 5—7, 6—2, 6—1.
Won, 6—3.

June 8th: Cup-tie *v.* Westminster Hospital. Home.
Singles:
Latter beat Evans, 6—2, 6—3.
Blackburne beat Brown, 6—2, 6—1.
Savage beat Anderton, 6—0, 6—3.
Kingdon beat Swaby, 6—1, 6—1.
Witt beat Billington, 6—4, 6—0.
Doubles:
Latter and Hunt beat 1st pair, 6—4, 6—4; beat 2nd pair, 8—6, 6—2; beat 3rd pair, 6—2, 6—0.
Blackburne and Kingdon beat 2nd pair, 6—0, 6—1; beat 3rd pair, 6—4, 6—2.
Witt and Savage beat 1st pair, 6—4 6—4; beat 3rd pair, 6—3, 3—6, 6—3.
We won 12—0, and so enter the semi-final round.

June 11th: "Past *v.* Present." Home.
Latter and Hunt beat Oulton and Way, 6—1, 6—2; Gibson and McLay, 6—3, 6—2; Everett and Courtney-Evans, 6—2, 6—2.
Blackburne and Kingdon beat 1st pair, 6—0, 4—6, 6—2; beat 2nd pair, 4—6, 6—4, 6—1; beat 3rd pair, 6—1, 6—0.
Savage and Witt beat 1st pair, 2—6, 4—6, 6—4; beat 3rd pair, 6—3, 6—4.
This was a most enjoyable match, and for a change was played in sunshine. Our only regret was that neither Sir Charles Gordon-Watson nor Mr. Bedford Russell were able to play, but everybody hopes that they will be able to play in next year's match.

June 11th: 3rd VI *v.* St. Mary's Hospital. Away.
R. H. Dale and J. Smart beat 1st pair, 3—6, 6—3, 6—4; beat 2nd pair, 6—1, 6—0; beat 3rd pair, 6—2, 6—0.
A. Innes and R. L. Benison beat 2nd pair, 6—3, 6—1; beat 3rd pair, 6—1, 6—2.
E. M. Darmady and E. H. T. Smyth lost to 1st pair, 5—7, 6—4, 4—6; lost to 2nd pair, 0—6, 0—6; beat 3rd pair, 4—6, 6—0, 6—0.
Won, 6—2.

June 12th: 1st VI *v.* Bank of England. Away.
K. A. Latter and J. H. Hunt lost to 1st pair, 6—2, 7—5; beat 2nd pair, 6—2, 6—4; beat 3rd pair, 6—4, 6—3.
J. R. Blackburne and J. R. Kingdon beat 1st pair, 6—3, 6—4; beat 2nd pair, 6—2, 6—3; beat 3rd pair, 6—4, 6—2.
R. C. Witt and P. T. Hardie lost to 2nd pair, 6—3, 3—6, 5—7; lost to 3rd pair, 9—11, 6—8.
Won, 6—2.

RIFLE CLUB.

Early in the year, judging by the scores made on the miniature range during the winter and the increased number and enthusiasm of active members, our chances for doing well at Bisley appeared good. Unfortunately we lost one of our most promising "shots" in the death of G. S. Druce in March following an operation. During the practice shoots our hopes were still maintained, a particularly notable event being the score of 101 (possible, 105) made by J. S. Bailey in his first long-range shoot of the season.

The shooting for the Armitage Cup was held in three stages on June 4th, 11th and 18th respectively. The other hospitals competing were Guy's, London, St. Mary's and St. Thomas's.

1st Stage.—Conditions were good; the wind was steady and the light, except at 600 yds., was excellent. Team score was as follows:

	200 yds.	500 yds.	600 yds.	Total.
K. F. Stephens	34	32	34	100
J. S. Bailey (Capt.)	33	32	32	97
J. R. Gillman	33	34	29	96
B. C. Nicholson	31	32	31	94
P. G. F. Harvey	31	29	32	92
B. P. Armstrong	32	30	28	90
Total				569

This left us first, with a lead of 5 points, St. Mary's being second with 564.

2nd Stage.—Conditions were not so good, the extreme changes in the wind proving our main difficulty. Team score was as follows:

	200 yds.	500 yds.	600 yds.	Total.
B. C. Nicholson	31	32	31	94
K. F. Stephens	31	31	31	93
J. R. Gillman	31	29	31	91
J. S. Bailey (Capt.)	31	31	28	90
B. P. Armstrong	29	28	30	87
P. G. F. Harvey	29	29	27	85
Total				540

This score brought us down to third place in the aggregate of the two stages. St. Mary's being first with a total of 1126 and Guy's second with 1118.

3rd Stage.—An extremely hot day. The light was very bright, and a "tricky" wind *again* made high scores very few and far between. Team score was as follows:

	200 yds.	500 yds.	600 yds.	Total.
J. S. Bailey	33	33	32	98
J. R. Gillman	33	31	33	97
B. C. Nicholson	32	33	31	96
K. F. Stephens	31	29	29	89
P. G. F. Harvey	30	27	29	86
D. O. Davies	31	29	22	82
Total				548

The final results were as follows:

1. St. Mary's	1676
2. Bart.'s	1657
3. Guy's	1649
4. St. Thomas's	1610
5. London	1101

The "Benetfink" Challenge Cup, awarded for the best aggregate score in the Armitage Cup, was won by J. S. Bailey with a score of 285.

At the United Hospitals' Prize Meeting, held on Saturday, June 18th, the following won prizes:

		Score.
J. R. Gillman	2nd Prize, 600 yds.	33
J. S. Bailey	3rd Prize, Aggregate	98
K. F. Stephens	Donegall Badge	46

K. F. S.

GOLF CLUB.

STAFF *v.* STUDENTS.

Played at Denham, May 18th.

Staff.		*Singles.*	*Students.*	
Mr. Milner	1		Carr	0
Mr. Just	0		Cutlack	1
Dr. Roxburgh	0		White	1
Dr. Graham	½		W. Wilson	½
Dr. Hinds Howell	0		Wedd	1
Dr. Garrod	1		Stanton	0
Prof. Kettle	1		Groves	0
Mr. Ball	0		J. Wilson	1
Dr. Wroth	0		Hole	1
Dr. Wells	1		Robins	0
Dr. Brewer	1		Gordon-Williams	0
Dr. Harris	0		Wynne Thomas	1
Mr. Meyrick Thomas	1		Nunn	0
Dr. Wade	1		Tideswell	0
Mr. Bedford Russell	0		Maclay	1
Mr. Higgs	0		Robertson	1
Mr. Foster Moore	0		Tubbs	1
Prof. Hopwood	1		Murless	0
Dr. Sparks	1		Leishman	0
	9½			9½

Foursomes.

Roxburgh and Milner	1	Carr and Cutlack	0
Graham and Hinds Howell	0	White and W. Wilson	1
Ball and Just	1	Groves and J. Wilson	0
Garrod and Kettle	0	Stanton and Wedd	1
Brewer and Harris	1	Hole and Tubbs	0
Higgs and Hopwood	0	Maclay and Nunn	1
Wade and Bedford Russell	1	Wynne Thomas and Robins	0
Meyrick Thomas and Foster Moore	1	Robertson and Leishman	0
Wells	0	Murless	1
	5		4

ATHLETIC CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* EMMANUEL COLLEGE, CAMBRIDGE.

Emmanuel brought down quite a strong team to compete against us on May 12th at Winchmore Hill. They had included E. W. Dennison, the 3-Mile Blue, and several Relay and Ulverston Colours. Although the weather was warm and fine, the track was heavy after overnight rain and fast times were not expected.

Emmanuel won most of the events—in fact Bart.'s were only victorious in three; yet our first and second strings obtained 2nd and 3rd positions in nearly every event, so that we just managed to gain a well-earned victory by 4 points. Counting 5 pts., 3 pts. and 2 pts. for 1st, 2nd and 3rd places respectively, Emmanuel led us by a couple of points until the 220 yards, which J. G. Nel won easily for us, and J. W. Perrott just managed to get 2nd place. The Quarter Mile was the remaining event, which C. A. Smith, of Emmanuel, won in 55⅕ sec., with W. H. Jopling and G. A. Fairlie-Clarke finishing 2nd and 3rd for Bart.'s Thus Bart.'s won an excellent and enjoyable match by 42 pts. to 38.

We were extremely fortunate in having the services of W. Hertzog, the Olympic athlete, in the Javelin and Weight events. J. G. Nel and the Emmanuel first string provided an excellent race in the 100 Yards. The result was a dead-heat after a somewhat doubtful start. E. W. Dennison, the Blue, never exerted himself much in the 2 Miles, and after allowing A. I. Kinnear and G. Dalley (Bart.'s) and E. I. Akeroyd (Emmanuel) to set the pace for the first 1½ miles, went right away in the last half-mile to win easily. J. W. P.

The following team represented the Hospital:

100 Yards: J. G. Nel and W. H. Jopling.
220 Yards: J. G. Nel and J. W. Perrott.
440 Yards: W. H. Jopling and G. A. Fairley-Clarke.
880 Yards: J. R. Strong and J. W. Perrott.
2 Miles: A. I. Kinnear, G. Dalley and H. B. Lee.
120 Yards Hurdles: H. W. Rodgers and F. W. Rushby.
Throwing the Javelin: W. Hertzog, C. M. Dransfield and G. Dalley.
Putting the Weight: W. Hertzog, G. D. Wedd and R. T. Simcox.

CORRESPONDENCE.

CAVALCADE.

To the Editor, 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—It is just two years since Dr. Langdon Brown contributed an article to this journal on the "Greek Play at Cambridge," in which he compared Noel Coward to Euripides—both post-war scoffers, both of outstanding excellence—and now it seems that that bold comparison has been vindicated in *Cavalcade* for the widely different reactions that this play has produced upon various members of the audience constitute such a tribute to the genius of the author as to raise him in eminence almost to the position of his Greek predecessor.

These few criticisms of the play were heard within the confines of the Hospital.

A simple student: "It was a wonderful spectacle, but I can't see why it should be praised so highly. The play seemed to me rather ordinary."

A sentimental student: "The saddest play I have ever seen."

An intellectual: "Noel Coward certainly had his tongue in his cheek when he wrote *Cavalcade*."

A major: "I enjoyed it enormously. The way in which the tunes were worked in was particularly clever."

A quiet nurse: "I was not thrilled. I felt as though I were back at school again turning over the pages of the picture books I had as a child."

An old Scotch lady: "What terrible luck those two poor people had—losing both their sons in that way."

A Jew: "Of course it was written for money. It is a magnificent business proposition, and was produced at the psychological moment. But the cheapness of the thing is unpardonable; losing one son on the 'Titanic' and another on Armistice day!"

Bewildered, I turned to a wise philosopher, and he said: "In *Cavalcade* the author holds up the mirror to life with such consummate skill that each one of us sees our own views reflected in it."

I am, Sir, etc.

H. B.

REVIEWS.

RECENT ADVANCES IN PATHOLOGY. By GEOFFREY HADFIELD, M.D., F.R.C.P.(Lond.), Professor of Pathology in the University of London, Pathologist to the Royal Free Hospital; and LAWRENCE P. GARROD, M.A., M.B., B.Ch.(Camb.), M.R.C.P. (Lond.), Bacteriologist and Lecturer in Bacteriology; late Demonstrator of Pathology, St. Bartholomew's Hospital. (London: J. & A. Churchill, 1932.) Pp. 392. 67 illustrations. Price 15*s*.

The preface begins: "We conceive the main purpose of this volume to be to present recently acquired knowledge of disease processes in a form useful to the student of Medicine." This purpose has been admirably achieved. The difficulty in writing a book of this type must be to know what to omit, and yet the authors have, in a few hundred pages, succeeded in giving a clear, concise and interesting description of the practical problems and advances in modern pathology. This achievement is the more remarkable when one considers the mass of material at their disposal. Under a number of separate chapter headings the important current views on a wide variety of subjects are set forth, and opposing arguments are clearly stated, usually with a minimum of bias.

The first seven chapters concern the reticulo-endothelial system, tissue culture, cancer research and deficiency diseases. The descriptions of these difficult subjects are well-nigh perfect. There follows an outline of endocarditis and a provocative chapter on the diseases of arteries. The respiratory system contains extremely good accounts of pneumonia, primary cancer of the lung, the pneumoconioses and anoxæmia.

The chapter on the digestive system, divided into three sections, on peptic ulcer, necrosis of the liver, and the pancreas, is too brief and sketchy. Indeed, the section on the liver had been better omitted than included in its present attenuated form.

A relatively large amount of space has been devoted to Bright's disease. The first of two chapters contains a critical discussion about this controversial subject. But in the second chapter dealing with the morbid anatomy, considerable stress has been laid on one particular classification. One is thankful to see the distinction between the renal changes in chronic glomerulo-nephritis and arterio-sclerosis clearly made and illustrated. Many will disagree, however, with the complicated subdivision of chronic glomerulo-nephritis into one diffuse and four focal forms.

Under the central nervous system, gliomata are discussed, and there is a lucid description of the encephalitis problem.

The last chapter on the ductless glands is excellent as far as it goes, but includes only the thyroid, the parathyroids, and the adrenals.

The illustrations throughout are beautiful. The list of references at the end of each chapter might be amplified with considerable advantage.

In conclusion, this book is worthy of the highest recommendation.

PREPARATION FOR MARRIAGE. A Handbook Prepared by a Special Committee on Behalf of the British Social Hygiene Council. Foreword by the Right Rev. the Lord Bishop of Liverpool. Edited by KENNETH WALKER, F.R.C.S. (London: Jonathan Cape, 1932.) Pp. 191. Price 5s.

On first thoughts the appearance of another book on this subject would appear unnecessary, so enormous is the literature already existing. It is indeed difficult to imagine how any person who is able to read could remain in ignorance of the physical facts of married life, since they are described in detail in books at all prices and obtainable on every bookstall. But this book is different from all the others. Recent correspondence in the *British Medical Journal* led us to expect something good, and we have not been disappointed. It was originally planned that the book should be a symposium of the views of several specialists, including a clergyman of the Church of England, two anthropologists, a physiologist, a psychologist, and an expert on genetics. On second thoughts these disjointed essays were welded together by the unifying pen of Mr. Kenneth Walker, whose own views are expressed in the opening chapter. Here at last is a book in which the facts are not manipulated in order to point a moral or to support the convictions of the writer. Information, not propaganda; sense rather than sentiment: these are the aims of the writer, who has also done the book the inestimable service of humanizing it, and removing from it the impersonal chill of the laboratory.

The teaching of the Church upon matters of sex is examined and criticized; the part played by the Church in preserving the institutions of marriage and the family is alluded to, and the asceticism of her teaching is explained. The anthropological aspects of marriage are next considered. It is shown that in the vast majority of peoples marriage is and always has been backed by a religious as well as by a legal sanction: the necessity for both is examined and maintained. The trial marriage is discussed and rejected by moralist, anthropologist and psychologist alike. Premarital intercourse, although it may be a means of testing the physical suitability of the partners, cannot be indulged in without risk to the future relationship. The succeeding chapters deal with anatomy and physiology in the usual way. The ethics of limitation of the family for reasons of economy or health are discussed, and the voluntarily childless marriage is deprecated. Heredity and the elements of Mendelism next claim attention. Birth-control methods are briefly described. It is confessed that no remedy for the postponement of marriage till the late twenties has yet been found. Continence as a universal ideal is apparently impossible to achieve. Whether or not it is desirable from the point of view of psychology is fully discussed. It is manifestly unjust to demand continence of all when the burden falls so unequally on different individuals. The advice to be given to young people therefore depends upon whether we attach more importance to morality and the race or to the individual.

Special value is to be attached to the remarks in the concluding chapter entitled "Advice to Advisers." Marriage is not so beset with problems and difficulties as the books lead us to believe. Where there is love few difficulties will appear; the couple happily married do not need an adviser. The book ends on the note of optimism.

Those who have read Mr. Kenneth Walker's delightful book *On being a Father* will not need to be urged to read this one also. Like its predecessor, it is interesting in every line and full of common sense and understanding. It will prove useful to all who contemplate marriage, or who wish to take upon themselves the task of advising others on matters of sex. A useful bibliography is appended. Mr. Kenneth Walker is to be congratulated upon the result of his labours.

BIOLOGY FOR MEDICAL STUDENTS. By C. C. HENTSCHEL, M.Sc., and W. R. IVIMEY COOK, B.Sc., Ph.D. (London: Longmans, Green & Co., 1932.) Pp. xii + 618. Price 18s.

We should like to congratulate the authors of this volume on their enterprise in writing a text-book of this nature for London University students. It is somewhat surprising that the task they set themselves has not hitherto been attempted, especially as the students working for the first medical examination of London University, have, for many years, been a numerically important body. While text-books have been written dealing with the zoological and with the botanical requirements of this class of student, the only text-book of biology written for the London medical student was designed to meet the needs of those working for the Conjoint Board Diploma.

With the passing of the years there has been a material increase in the number of candidates taking the first examination at the University, so that the book under review is published at an opportune moment—if indeed it is not overdue.

The authors stress their conviction that the general principles of biology can be most satisfactorily taught by treating the subject as a comprehensive whole. With this point of view we are in profound agreement, for a broad outlook on all the manifestations of life should be part of the equipment of every medical man. Biology is, in fact, a foundational subject for those who intend to devote their lives to an intensive study of that branch of it which is called medicine.

The work may be whole-heartedly recommended to all first-year students. The mode of treatment and general arrangement of the subject-matter is thoroughly satisfactory, and the authors write in a style which is clear and interesting. It is evident that they have had considerable experience in teaching the medical student, and that they have taken pains throughout to consider his peculiar needs. They have not hesitated to illustrate their remarks from a wide field, and in a way which adds much to the general interest of the text. We commend as a very useful feature the short glossary of prefixes and suffixes. This has a special value to-day, when so few of those who study medicine have any knowledge of Greek. The volume is well produced and bound, the type being exceptionally clear, while the price cannot be regarded as excessive.

As regards the illustrations, there are over 300 new figures, in addition to a number of useful diagrams from other works. As well as some excellent photographs, we note a number of new drawings of considerable artistic excellence, though certain of these are marred by their small size. In the new figures the authors have adopted the wise course of naming the parts in full, and thus sparing the reader the task of identifying them by the aid of letter in a foot-note.

St. Bartholomew's men will approve the well-deserved tributes to T. W. Shore, which appear both in the preface and in a foreword by the Director of the Surgical Unit.

THE LABORATORY IN SURGICAL PRACTICE. By E. C. DODDS, M.V.O., M.D., and L. E. H. WHITBY, C.V.O., M.D., M.R.C.P. (London: Constable & Co., 1931.) Pp. ix + 187. Illustrated. Price 8s. 6d.

The appearance of this new manual on clinical pathology is entirely justified by the admirable style in which it is written, the sound quality of the views expressed, and the precision and simplicity of its descriptions. It is meant to be a help to the clinician who has to do his own pathology, rather than for the pathologist and biochemist. The opinions expressed are derived from the authors' personal experiences in the field of clinical pathology. No details are given of analytical methods, except in a few simple cases.

The chapter on blood transfusion is the best in the book. The technique of grouping is described in detail, and all its fallacies are carefully considered. An indirect test and a direct test are insisted upon in all cases. The transfusion of whole blood is advocated where possible; this is a procedure which demands considerable skill. The technique is not, however, given. Two admirable plates illustrate pseudo-agglutination as compared with true agglutination, both the naked-eye and the microscopic appearances being given.

A useful section deals with bacteriophage and its use in treatment of intestinal and urinary infections. Modern views on osteitis fibrosa are outlined, but the consideration of calcium metabolism might have received fuller treatment, in view of its increasing importance.

Very useful and interesting information is given on the examination of urethral and prostatic smears in chronic gonorrhœa and the standards of "cure." This is the clearest account we have read of this condition.

Van Slyke's urea clearance test is omitted, and Esbach's estimation of protein in urine is condemned in favour of a colorimetric biuret reaction, details of which would have been welcome.

The excellent plates illustrating intravenous pyelography deserve special mention. The book can be recommended thoroughly to students and practitioners.

SURGERY OF THE GENITO-URINARY TRACT. By RALPH COYTE, M.B., B.S., F.R.C.S. (London: Jonathan Cape, "The Modern Treatment Series," 1932.) Price 5s.

This small book is one of the "Modern Treatment Series," intended to provide at a small cost a manual of pocket size for the senior student or general practitioner. The subject concerned is reviewed and the most modern methods recounted while leaving out the more academic and theoretical matter. They are thus intended to be practical.

Mr. Coyte covers much ground, and although it is stated in the preface that such treatment as is described should, roughly speaking, be within the scope of a general practitioner, we feel that the book errs on the generous side in this matter.

The arrangement is an anatomical one—diseases of the kidneys and ureter, and so proceeding distally; finally there is a chapter describing operations on the kidney and ureter.

There are no illustrations—a feature which is a mixed blessing. A few simple line drawings greatly aid the reader. On the other hand, Mr. Coyte's descriptions are extremely lucid, and diagrams would of course increase the bulkiness of the book. The writer is very pessimistic as to the value of nephropexy—an operation for which he apparently has no use.

The book is neatly produced and should be a useful work, especially for general practitioners, who have here a ready means of keeping their knowledge of genito-urinary work up to date.

A GUIDE TO GENERAL PRACTICE. By A. H. DOUTHWAITE, M.D., F.R.C.P. (London: H. K. Lewis & Co., 1932.) Pp. vi + 96. Price 4s. 6d.

This very moderately priced book is a gold-mine of useful informal tion for those who are about to embark upon a career of genera-practice, whether alone or in partnership. Dr. Douthwaite has had a large experience of general practice, and the advice which he gives is entirely practical, none of his opinions being based upon theory. The proper procedure of choosing and entering upon a partnership is fully dealt with and occupies a great part of the book. Sound advice is given on the matter of present and future income tax liabilities of the incoming partner—an aspect usually ignored or forgotten by the uninitiated, who may suffer severely in consequence. An equitable provision for dissolution of the partnership should be made; this important matter is not always given due consideration, and its omission may be expensive, involving sacrifice of all or a large part of the money which the junior partner put into the venture. The book can be read through in a couple of hours, and the time will be well spent. The chapter on articles of partnership will be useful for reference. An amusing list of undesirable habits is given, and the chapter on the business aspects of practice is extremely useful and practical. The book bridges effectively the hiatus which exists between the hospital education of the recently qualified man and the entirely different self-education of the experienced general practitioner.

AN INTRODUCTION TO DERMATOLOGY. By NORMAN WALKER, Kt., M.D., F.R.C.P.; assisted by G. H. PERCIVAL, M.D., F.R.C.P. Ninth edition. (Edinburgh: W. Green & Son, 1932.) Pp. xix + 382. 100 plates and 92 illustrations. Price 20s.

We welcome the latest edition of this famous text-book of skin diseases, which first appeared in 1899. It is undoubtedly the most readable and attractive book on the subject that we have seen, and its success in reaching a ninth edition is ample evidence of its value. Dermatology as a science is making rapid advances, but only the recent work of proved worth and general acceptance is included in this volume. As the title indicates, only the commoner skin diseases are described fully; the rarer conditions are briefly dealt with. The beauty of the coloured plates is well known; we imagine that they have contributed more to the success of the book than any other single feature of the work.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ABRAHAMS, ADOLPHE, O.B.E., M.D., F.R.C.P. "Dietetic Facts, Fads, and Figments." *Practitioner*, May, 1932.

AINSWORTH-DAVIS, J. C., M.B., F.R.C.S. "Ureterocele: Some Observations Based on the Investigation and Treatment of Four Cases." *British Journal of Surgery*, April, 1932.

BETT, W. R., M.R.C.S., L.R.C.P. "An Unusual Case of Multiple Lipomata in a Boy, aged 2 years." *British Journal of Children's Diseases*, January–March, 1932.

CHANDLER, F. G., M.D., F.R.C.P. "Artificial Pneumothorax, Adhesion Cutting, and Oleothorax." *British Medical Journal*, June 18th, 1932.

CLARKE, ERNEST, C.V.O., M.D., F.R.C.S. "The Relations between Eye Disease and General Medicine." *Practitioner*, May, 1932.

DRU DRURY, E. G., M.D., B.S.(Lond.), D.P.H.(Dur.). *Choosing a Wife and other Essays*. London: H. K. Lewis & Co., 1932.

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HILTON, REGINALD, F.R.C.P. *See* Kettle and Hilton.

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ROBERTON, HENRY E. W., M.A., M.B., B.Ch. "The Extent of the Pancreatic Lesions in Diabetic Children." *Archives of Disease in Childhood*, April, 1932.

ROCHE, ALEX. E., M.A., M.D., M.Ch.(Cantab.), F.R.C.S. "Cystoscopy and the General Practitioner." *Clinical Journal*, April 27th and May 4th, 1932.

WALKER, KENNETH M., O.B.E., F.R.C.S., M.A., M.B., B.C. "The Inoperable Prostate." *Practitioner*, June, 1932.

WEBER, F. PARKES, M.D., F.R.C.P. "Nightmares and Freudian Explanations." *Medical Press and Circular*, April 20th, 1932.

——— "Basophilic Hyperpituitarism and ? Basophilic Hypopituitarism." *British Medical Journal*, May 21st, 1932.

WOOLLARD, H. H., M.D. "Beri-Beri and Neuritis." *The Australian Journal of Experimental Biology and Medical Science*. The Robertson Memorial Volume, 1932, ix.

EXAMINATIONS, ETC.

University of London.

Third (M.B., B.S.Lond.) Examination for Medical Degrees, May, 1932.

Honours.—Scowen, E. F. (*d*).

(*d*) Distinction in Surgery.

Pass.—Baxter, W. S., Jardine, D. K., Keele, K. D., Knox, R., Reid, R. D., Riley, A. C., Smith, D. A., Ward, E. M.

Supplementary Pass List.

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WOOD SMITH, F. G., 2, Ashley Place, Westminster, S.W. 1. (Tel. Victoria 3908.)

BIRTHS.

BARNSLEY.—On June 7th, 1932, at Ellesmere, Shropshire, to Doris (*née* Shaw), wife of Arnold Barnsley, B.Chir., M.R.C.S., L.R.C.P.—a daughter.

BURTON WOOD.—On May 29th, 1932, at 8, Park Village West, Regent's Park, to Dr. and Mrs. W. Burton Wood—a daughter.

EBERLIE.—On May 28th, 1932, at Flint Cottage, Luton, to Dr. and Mrs. W. F. Eberlie—a son.

HOUNSFIELD.—On June 19th, 1932, at The Beeches, Stowmarket, to Evelyn (*née* Ranleigh Jones), wife of Dr. Maurice C. Hounsfield—a son.

JEPSON.—On June 10th, 1932, at 27, Welbeck Street, to Jean, wife of W. Baly Jepson, of West Byfleet, Weybridge—a daughter.

WALSH.—On June 5th, 1932, to Marian (*née* Jacks), wife of Robert A. Walsh, D.M., of Stucley House, Great West Road, Lampton, Middlesex—a daughter.

MARRIAGES.

BRAIMBRIDGE—FEAR.—On February 5th, 1932, at St. Andrew's, Nairobi, Kenya, Clifford Viney Braimbridge, M.V.O., F.R.C.S.Ed., East African Medical Service, to Molly Fear.

BUNCOMBE—RICHARDS.—On June 18th, 1932, at St. Stephen's Church, Norwich, by the Rev. F. E. Cole and the Rev. A. W. E. McCombe, Guy Hope Buncombe, M.R.C.S., L.R.C.P., eldest son of Dr. and Mrs. Wm. Dewey Buncombe, of Walberswick, Suffolk, to Grace Ellen, daughter of the late Mr. and Mrs. Philip Richards, of East Harling, Norfolk.

CROSS—GRAYRIGGE.—On May 23rd, 1932, at the Brompton Parish Church, London, Dr. R. M. S. Cross, only son of Dr. R. G. Cross, J.P., and the late Mrs. Cross, of Petersfield, Hants, to Mary, younger daughter of the late Gray Grayrigge and Mrs. Grayrigge, of Kensington.

FOX—CROMBIE.—On June 8th, 1932, in London, George Noël Fox, B.A.(Cantab.), L.M.S.S.A.(Lond.), eldest son of Dr. and Mrs. Fox, of Downderry, Cornwall, to Esther, only daughter of Mr. and the late Mrs. A. B. Crombie, of Edinburgh, now of Yoxley Drive, Ilford, Essex.

HOSFORD—VAUGHAN EDWARDS.—On June 10th, 1932, at Heworth Parish Church, York, John Hosford, M.S., F.R.C.S., 8, Harley Street, London, second son of Dr. and Mrs. B. Hosford, of Highgate, to Millicent Sacheverell, elder daughter of Brigadier-General C. Vaughan Edwards, C.M.G., D.S.O., and Mrs. Vaughan Edwards, Heworth Hyrst, York.

LLEWELLYN—STEWART.—On June 2nd, 1932, at Holy Trinity, Brompton, by the Rev. B. G. Bourchier, E. E. Llewellyn, M.D., Virginia Water, to Irene Lockhart Stewart, only daughter of the late H. R. Stewart, of Tientsin, China, and Mrs. Davy, of Fieldmoor, Virginia Water.

POPE—INNES-LILLINGSTON.—On June 11th, 1932, at St. Paul's Church, Knightsbridge, Edwin Stanley Pope, second son of Mr. and Mrs. F. R. Pope, Twitts Croft, Five Ashes, Sussex, to Barbara Joan, younger daughter of Lieut-Col. and Mrs. Innes-Lillingston, of East Sheen, Surrey.

RADCLIFFE—BRÉE.—On May 26th, 1932, at the Parish Church, Manningtree, Walter Radcliffe, son of Dr. and Mrs. Frank Radcliffe, of Dedham, to Muriel Laure, daughter of the Rev. W. Brée and the late Mrs. Brée, of St. Servan, France.

ROBINSON—WILLIAMS.—On May 29th, 1932, at Benton, Richard Deane Robinson, M.B., B.S., eldest son of the late Major-General W. H. B. Robinson, C.B., I.M.S., and Mrs. Robinson, of Charlbury, Oxon, to Freeda, younger daughter of Mr. and Mrs. C. Williams, of Benton, Illinois, U.S.A.

THOMPSON HANCOCK—BARNES.—On June 4th, 1932, at St. Margaret's, Westminster, Percy Ellis, eldest son of Dr. and Mrs. Thompson Hancock, to Dorothy (Blue), youngest daughter of Mrs. Bramwell Barnes, of 74, Knightsbridge, S.W.

DEATH.

MUNDY.—On May 26th, 1932, Herbert Mundy, F.R.C.S., D.P.H., of Durban, Natal.

NOTICE.

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